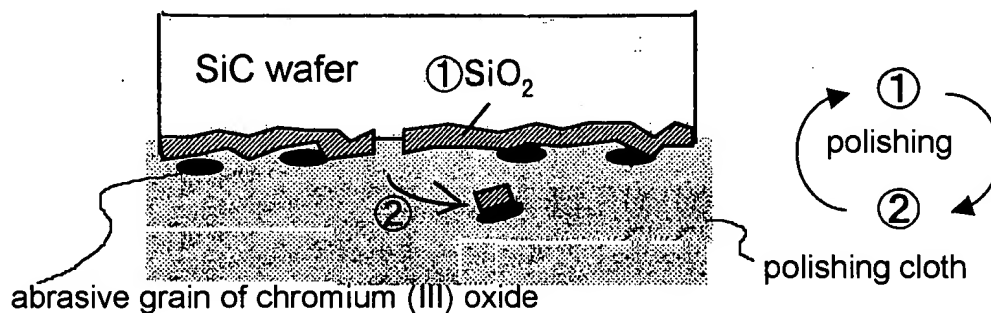


### REMARKS

Claims 44, 47-58, 61-65, 67-69 and 74-79 are pending. Claims 1-43, 45, 46, 59, 60, 66, and 70-73 have been canceled. The applicants respectfully request reconsideration and allowance of this application in view of the above amendments and the following remarks.

Claims 44, 47-56, 58, 61, 62, 64, and 67-69 were rejected under 35 USC 102(e) as being anticipated by or, in the alternative, under 35 USC 103(a) as being unpatentable over the patent to Towery et al.

SiC is very hard and is difficult to polish. In the mechanochemical polishing of the present invention, the oxygen concentration on the surface of the SiC wafer is increased by the presence of hydrogen peroxide water to promote the formation of an oxide of the SiC. The oxide is soft and relatively easy to polish. As shown below, the first, on the surface of the SiC wafer, the oxide ( $\text{SiO}_2$ ) is formed by a chemical reaction between the SiC and the hydrogen peroxide water using chromium (III) oxide as a catalyst. Then, the oxide is removed in by the abrasive grains of chromium (III) oxide.



In the interview of 15 September 2003 with examiner Shakeri, it was argued that the Towery patent shows polishing of a dielectric layer, not SiC, as claimed in the independent claims. In the Towery patent, only dielectric is being removed, and not the silicon substrate 34. The examiner agreed that Towery failed to show polishing of an SiC wafer, but the examiner stated that the claims should clearly recite that SiC is actually being removed from the wafer by the polishing. That is, as stated in the Interview Summary, according to the examiner, the surface being polished should be defined in the claims. In response to the examiner's comments, both independent claims 44 and 61 have been amended to recite that SiC is being removed by the polishing. Accordingly, the applicants respectfully request that the rejections based on the Towery patent be withdrawn.

In addition, claim 61 has been amended to recite a cavity or gap that extends in a direction perpendicular to the surface of the polishing cloth. In other words, the cloth is soft and easy to penetrate. This prevents scratches and crystal distortion. The amendment to claim 61 is supported at page 18, line 8, thorough page 19, line 4, of the specification.

Claims 76-79 are new. Claim 76 is dependent on claim 44 and is believed to be in condition for allowance for the reasons given above in support of the patentability of claim 44. Claim 76 is supported at page 15, line 4, of the specification.

Claim 77 is dependent on claim 44 and is believed to be in condition for allowance for the reasons given above for the patentability of claim 44. Claim 77 is supported at page 12, line 24 through page 13, line 18, and Figs. 8 and 9 of the specification.

Claim 78 is dependent on claim 61 and is believed to be in condition for allowance for the reasons given above for the patentability of claim 61. Claim 78 is supported at page 24, lines 19-27 and Fig. 16 of the specification.

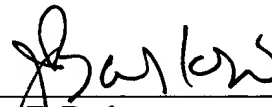
Claim 79 is dependent on claim 61 and is believed to be in condition for allowance for the reasons given above for the patentability of claim 61. Claim 79 is supported at page 25, line 17 through page 26, line 9 and Fig. 10 of the specification.

In view of the forgoing, the applicants respectfully submit that this application is in condition for allowance. A timely notice to that effect is respectfully requested. If questions relating to patentability remain, the examiner is invited to contact the undersigned by telephone.

Claims 74 and 75 were added in the amendment filed on 6 March 2003; however, these claims were not treated in the final rejection of 17 April 2003. If this application is again rejected, the applicants respectfully request treatment of these claims.

Please charge any unforeseen fees that may be due to Deposit Account No. 50-1147.

Respectfully submitted,



James E. Barlow  
Reg. No. 32,377

Posz & Bethards, PLC  
11250 Roger Bacon Drive, Suite 10  
Reston, VA 20190  
Phone 703-707-9110  
Fax 703-707-9112  
Customer No. 23400